



Garages and Petrol Stations

Medium Risk Sector



Repair and maintenance of motor vehicles, including changing oil and other fluids as well as sale of fuel.

Related Sectors:

- Oil and Gas
- Transport



Production Processes

In garages, motor vehicles are bought, sold and maintained. This work may include changing oil and other lubricants, refilling coolants, brake fluids and the repair of tires.

Body shop activities also involve the machining of metal parts. This may include cutting, welding, hammering, forging, sanding, polishing and turning, as well as the cleaning, degreasing and painting of metal parts.

Car painting is done with liquid paints in paint booths or by using the powder coating technique. The former method requires paints or varnishes based on water or organic solvents. The latter technique describes the process of spraying electrostatically charged pigment and resin particles onto the surface to be coated. The adhered particles are then fused onto the surface in a curing oven.

Car washes range from do-it-yourself coin-operated facilities to fee-based full-service operations. Whereas the former offer water and soap for cleaning, the latter are mechanized and also offer waxing and sometimes underbody and engine washes.

Petrol stations primarily provide fuels, such as petrol, diesel and natural gas. Usually, lubricants, water and pressured air, as well as cleaning services, are also on offer.

Fuel and gas is delivered to petrol stations in large tankers and then stored in large tanks.

Sustainability Issues

L	Energy
L	Water Use
H	Emissions to Water
M	Waste
M	Emissions to Air
L	Ecosystems
M	Workplace Health & Safety
M	Disaster Risk
H	Site Contamination

Sector Rating

- H High risk issue
- M Medium risk issue
- L Low risk issue

Risks & Opportunities

- Contamination of real estate presents a risk to its value, to human health and to the environment.**
Spills, leaks and the disposal of waste on site may lead to contamination by fuel and other hazardous substances. Contamination may present a risk to groundwater sources and to human health. Clean-up costs can be considerable and the market value of the land may be impaired. Contamination can be minimized by training staff and technical measures such as sealed ground and catchment tanks.
- Substances traded in filling stations and used in garages may pollute water.**
Hazardous substances (fuel, oil, paints, chlorinated solvents and detergents) may be emitted with wastewater from washing vehicles or they may be spilled. Tanks and pipes may leak. Basic precautions, such as sealed ground, catchment tanks and oil separators reduce the risk of emissions to water.
- Garages generate significant amounts of hazardous waste that should be disposed of appropriately.**
The majority of waste from garages can be recycled (used tyres, metal parts, etc.). Hazardous waste includes: Used oil, transmission and brake fluids, antifreeze, solvents, cleaning agents, paints and thinners, batteries, abrasive grit blast media. Appropriate disposal of hazardous waste minimizes risks to human health and the environment.
- Filling stations emit volatile substances such as fuels to the air.**
In built-up areas this may be a nuisance and a health risk to neighbors. Emissions of fuel vapors to the air also contribute to summer smog.
- The large amounts of fuels stored at filling stations pose a risk of fires and explosions.**
Fires at a fuel station can lead to explosions. The effects on the plant and its surroundings may be disastrous and fire may spread to neighbouring areas. Standard precautions minimize the risk of such events while emergency planning mitigates the effects.